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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,921	08/25/2003	Masami Makino	031056	1950

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EXAMINER

JENKINS, KIMBERLY YVETTE

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,921

Applicant(s)

MAKINO ET AL.

Examiner

Kimberly Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inubushi et al. (US 6148075) in view of Kenmochi (US 6084190) in further view of Chan et al. (US 6765503).

Regarding claims 1 and 6, Inubushi, who teaches an illuminated button backlit by white light, expressively discloses a key input device comprising a plurality of input keys (col. 1, lines 7-10) arranged on a surface of a main body of transparent resin (read as transparent layer, col. 4, lines 36-40 and col. 5, lines 20-22), the key body 4 being provided with a light blocking film 17 (col. 6, lines 1-6). Additionally, Inubushi discloses the keys being provided with a light source positioned there below for illuminating the input keys 4, the key input device being characterized in that each of the input keys 4 are illuminated via light source 14 (read as EL, col. 6, lines 18-38). Inubushi discloses the screen 18 as

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being extended over a portion of the area to be illuminated portion which includes a region opposed to the light transmitting pattern 9; however, Inubushi does not disclose the a light blocking film as being partly cut out to form a light transmitting pattern.

However, Kenmochi, who teaches an illuminated key and method of manufacturing thereof, expressively discloses a key top surface 2 comprising a light blocking film 4 (printed pattern) with a partial light transmitting reflecting layer 4a on the key top 2 (col. 5, lines 13-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the light blocking film of Kenmochi to be incorporated into the key input device of Inubushi, because Inubushi discloses an illuminated key device wherein the keys have light blocking layer over the character pattern, whereas Kenmochi discloses the illumination key as having a laser etched pattern for reduction of manufacturing costs. However, the modification of Inubushi in view of Kenmochi does disclose an opaque or semi-transparent layer at the rear of the key surface (between rear of key and light source).

However, Chan, who teaches a backlighting source for a computer keyboard, expressively discloses the light source EL as being directly under a translucent layer, which is underneath the key cap (col. 4, lines 4-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include translucent layer of Chan into Inubushi in view of Kenmochi, because Inubushi in view of Kenmochi teaches a keypad wherein the keys have a translucent pattern on the key surface, whereas Chan discloses a translucent layer between the light source and the rear surface of the key as means of controlling the light intensity.

Regarding claims 2-4, Inubushi discloses screen 18 as being adjusted in light transmittance and area in accordance with the shape of the light-transmitting pattern (col. 6, lines 18-38). Moreover, Inubushi discloses the screen as being divided into a plurality of screen pieces (Figs. 1-9).

Regarding claim 5, Inubushi discloses the screen 18 as being colored in that the screen reflects the colors from the light source 14 (col. 6, lines 31-36).

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Chan et al. (US 6871978) teaches a computer keyboard backlighting system.
- Kubes et al. (US 5971557) teaches an LEP electo-luminescent (EL) backlit keypad for a cellular phone.
- LaPointe et al. (US 61100478) teaches an EL keypad.

- Hannahara et al. (US 6670565) teaches an illuminated button switch for electronic devices.
- Ostengard et al. (US 6704004) teaches an arrangement for integration of key illumination into the key mat of portable electronic devices.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Jenkins whose telephone number is 571.272.3064. The examiner can normally be reached on 7am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571.272.3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly Jenkins
Examiner
Art Unit 2635
13 February 2006

KJ

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

